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## **DETAILED ACTION**

### ***Status of the Claims***

1. Claims 23-30, 32 and 41-45 are pending.

Applicants' amendment filed July 6, 2009 is acknowledged. Applicants' response has been fully considered. Claim 32 has been amended. Therefore, claims 23-30, 32 and 41-45 are examined.

### **Withdrawn Claim Objections**

2. The previous objection to claim 32 is withdrawn in view of applicant's amendment to the claims, and applicant's response at page 6 of the remark filed July 6, 2009.

### **Withdrawn Claim Rejections-Obviousness Type Double Patenting**

3. The previous rejection of claim 32 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9 of U. S. Patent 6,656,721, is withdrawn in view of applicants' submission of a terminal disclaimer, and applicants' response at pages 6-8 in the amendment filed July 6, 2009.

### ***Examiner's Amendment***

An **Examiner's Amendment** to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

#### **Examiner's Amendments to the Specification:**

Please replace the paragraph inserted before the first line at page 1 of the specification in the request for filing a divisional application filed October 8, 2003 with the following paragraph:

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This application is a divisional of U. S. Application Serial No. 09/633,927, filed August 8, 2000, now U. S. Patent 6,656,721.

**The following is an Examiner's Statement of Reasons for Allowance:** The following references are related to the claimed invention. Pai (J. Bacteriology 121, 1-8 (1975)) teaches the isolation of eleven independent biotin auxotrophs in *B. subtilis* by mutagenesis in *bioA* and *bioB* genes. Bower *et al.* (U.S. Patent 6,303,377) teach the insertion of a cat gene in *bioW* gene and deletion in *bioB* cause biotin auxotrophy in *B. subtilis*. The instant application also discloses introducing a polynucleotide comprising *bioFDB* deletion-insertion mutation into the microorganism causes biotin auxotrophy. The declaration of Dr. Nigel J. Mouncey indicates the level of knowledge and skill in the art is high, thus one skilled in the art could easily generate biotin auxotrophs by disrupting the function of genes in the bio operon. In view of art in biotin auxotrophy, the amendment of the claims, and applicants' response, the rejection under 35 U.S.C. 112, first paragraph, scope of enablement and written description is withdrawn. Hohmann *et al.* (U. S. Patent 6,656,721) claim a riboflavin production microorganism RB50 containing multiple copies of pRF69, which microorganism is transformed with the polynucleotide sequence of SEQ ID NO:1 (a polynucleotide sequence with a *bioFDB* deletion-insertion mutation). An obviousness-type double patenting rejection was made over the patent in the instant application, and the double patenting rejection has been withdrawn since a terminal disclaimer was filed. Therefore, the claims are allowable over the art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (571) 272-0948. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached at 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Chih-Min Kam/

Primary Examiner, Art Unit 1656

CMK

October 29, 2009